

at the sides. Elytra a little broader than the prothorax, slightly widened posteriorly. Legs rather slender.

Length 4-5 mm.

Hab. Sikkim (*type of Pic*), W. Almora [v.1919] and Ranikhet [iii.1920] Divisions of Kumaon (*II. G. C.*).

Seven ♀♀, all but one from Ranikhet, are provisionally referred to *M. sikkimensis* Pic, the type of which is said to have the basal joints of the antennae pale beneath, these organs being entirely black in the specimens before me. This species belongs to Abeille de Perrin's Group 1, "Cardinales," and it is allied to the S. European and N. African *M. coccineus* Waltl.

Horsell, Woking.

March 1921.

OBSERVATIONS ON BRITISH COCCIDAE, WITH DESCRIPTIONS OF
NEW SPECIES.*

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No. VI.

Ortheziola vejtdorskyi Sulc.—This curious little insect was taken, in considerable numbers, under loose stones, at Minehead (Somerset), early in October. They were unassociated with ants of any kind. The same species was received from Mr. H. M. Hallett, who collected them, amongst moss, at Penarth (S. Wales), in the last week of November. Individuals of this later gathering were carrying short ovisacs which covered the under surface of the abdomen and projected slightly beyond the extremity of the body.

Orthezia urticae L.—Taken on stems of *Artemisia maritima* (Blakeney Point, Norfolk, 17.vii.1920) and on *Teucrium scorodonia* (Minehead, Somerset, 28.ix.1920).

Eriococcus inermis Green.—The particular grass upon which this species habitually occurs has now been determined as *Festuca ovina*. On rough land, where this grass predominates, the insect may often be found in abundance. I have sometimes collected over one hundred specimens in an area less than a yard square.

Eriococcus glyceriae, nov. (Fig. 1.)

Insects at first naked, of a rosy-pink colour, with a thin efflorescence of white powdery secretion; finally enveloped in a dense white ovisac.

* Continued from vol. lvi., pp. 114-131, May and June 1920.

Adult female (*a*) elongate-ovate; anal lobes reduced and scarcely differentiated. Antenna (*d*) 7-jointed, the joints relatively short and stout, 3rd longest. Eyes well defined. Legs comparatively small; tarsus approximately equal to tibia (*e*); claw long and slender; unguis and tarsus digitules slender, very slightly knobbed at extremity; a long slender seta on the trochanter, and two or three setae on each of the other segments of the limb. Posterior extremity (*b*) with a pair of long and slender caudal setae; anal ring with 8 setae, the longest of which is only about one-quarter the length of the caudal

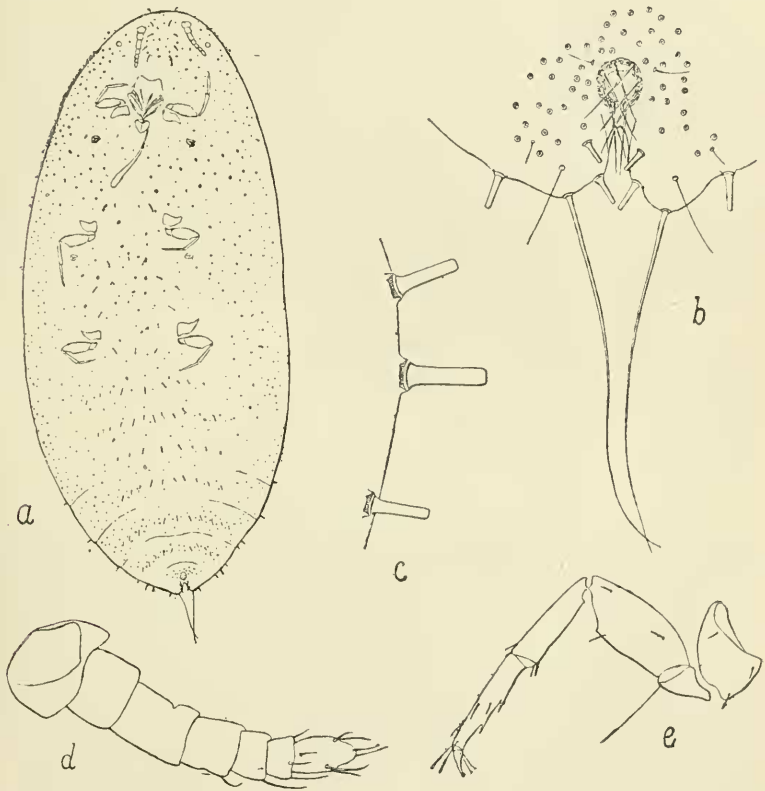


Fig. 1.—*Eriococcus glyceriae*. Adult ♀ : *a*, ventral view, $\times 30$; *b*, posterior extremity, $\times 220$; *c*, marginal spines, $\times 450$; *d*, antenna, $\times 220$; *e*, mid leg, $\times 130$.

setae. Spines (*c*) stout, cylindrical, truncate; from 8 to 11 on each side, confined to the margins of the terminal four or five segments of the abdomen (see fig. 1, *a*). The anal segment (comprising the anal lobes) bears 3 spines on each side; the penultimate segment carries 3 (rarely 4); each of the preceding three segments usually has a single spine only, though a second is not infrequently found on the antepenultimate segment, and the uppermost spine of the series is often absent. Derm with numerous thick-rimmed pores, more crowded towards the posterior extremity. A transverse series of short setae across the

venter of each abdominal segment, and some similar setae on the frons and on the median area of the thoracic segments. Length of fully mature female 2.5 to 3 mm. Breadth (under compression) 1 to 1.75 mm.

Ovisac white, densely felted, moderately convex when placed in an exposed situation, but usually depressed or flattened owing to its position amongst the crowded stalks at the base of the plant. Dimensions very variable, ranging from 2.5 by 1, to 4 by 1.5 mm.

On *Glyceria maritima*; Blakeney Point, Norfolk.

The insects occur at the base of the grass stems, sheltered beneath the leaf-sheaths. Their presence is made noticeable by a deposit of white pulverulent secretion. When first observed—in the month of July—before the formation of the ovisac, the insect was mistaken for a species of *Rhizococcus*; but examination of further material, in September, proved its correct position to be in the genus *Eriococcus*. The insect is practically of a subterranean habit, occurring more commonly below the surface of the sand in which the grass grows. The stems of the grass spring from underground rhizomes.

The species is well characterized by the limitation of the spines to the margins of the posterior segments only. Moreover, it is the only British species in which the spines are truncately cylindrical.

Eriococcus placidus, nov. (Fig. 2.)

Adult female long-ovate; anal lobes relatively small, but prominent, weakly chitinized. Antenna (*a*) 7-jointed, stout; 3rd and 4th longest, approximately equal. Eyes well defined. Legs relatively large; tarsus as long as or slightly longer than tibiae (*e*); claw (*f*) long, a minute denticle near the tip, on the inner edge; two unusually long and slender setae on inner edge of tarsus; apical spines on inner extremity of tibia unusually long; unguinal and tarsal digitules long and slender, the former simple, the latter minutely knobbed at apex. Anal ring with 8 setae. Caudal setae long and stout. Dermal spines very few, confined to the frontal area and the anal lobes; three or four only on the frons (*c*), very slender and acutely pointed; three on each of the anal lobes (*d*), of which two, on the inner margin, are longer and stouter, while the third, on the dorsal face, is minute; no spines on any other part of the body, which is, however, sparsely beset with longer and shorter setae. Dermal pores numerous, of several distinct forms (*b*)—viz., trilocular pores (few), quinque-ocular pores (numerous), large ring-shaped pores (numerous), and tubular pores with expanded rims (few).

Length 2.5 to 3 mm.; breadth 1 to 1.25 mm.

Ovisac large and conspicuous, strongly convex, of a greyish-ochreous colour; the outer covering loose and woolly, the inner parts unusually tough. They might be mistaken for small examples of the ovisacs of *Eriopeltis festucae*, in which the covering had become matted by exposure to weather.

Length 3.5 to 4.5 mm.; breadth 2 to 2.25 mm.

On the upper surface of leaves of a grass (? *Festuca* sp.); Thurnham, Kent, S.ix.1920.

Differs from *inermis* in its much greater size, in the presence of a

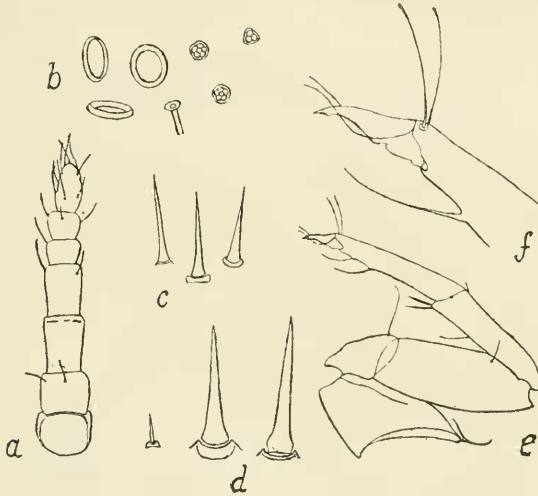


Fig. 2.—*Eriococcus placidus*. Adult ♀: *a*, antenna, $\times 135$; *b*, dermal pores, $\times 450$; *c*, spines from frontal area, $\times 450$; *d*, spines of anal lobes, $\times 450$; *e*, mid leg, $\times 130$; *f*, claw, $\times 450$.

few spines on the frontal area, in the character of the dermal pores, and in the form and texture of the ovisac.

Eriococcus pseudinsignis, nov. (Fig. 3.)

Adult female elongate, rather narrow; anal lobes rather small, weakly chitinized. Antenna (*c*) 7-jointed; the 4th usually longest, occasionally equal to 3rd; 7th varying in length, either shorter or longer than the 6th. Legs relatively large and well developed; tibia and tarsus of approximately equal length; apical spine of tibia unusually long; claw (*b*) with a very minute (scarcely perceptible) denticle near its extremity; unguis long and slender, minutely knobbed; tarsal digitules long and dilated at extremity. Caudal setae long and stout. Dermal spines confined to the marginal areas, with the exception of a few which occur on the median area of the thorax; disposed in a single series (in groups of three) on the abdominal margin (*d*), but tending to become irregular and diffused on the margins of the thorax; irregularly crowded on the frontal area (*a*); those of the medio-thoracic area (*e*) much smaller than those on the marginal area (*f*). Venter with transverse series of slender setae, longer and irregularly disposed on the frons. Derm with numerous tubular pores (*g*), the inner extremity of each pore with a thickened rim; no trilocular pores.

Length 2 to 2.5 mm.; breadth 1 mm.

Ovisac elongate-ovate, narrower towards the posterior extremity, whitish or pale ochreous; of compact, close texture.

Length 2.5 to 3 mm.; breadth 1.25 to 1.5 mm.

On upper surface of leaves of a grass (? *Festuca* sp.); Thurnham, Kent, Sept. 1920.

The ovisacs are almost invariably placed at the junction of the

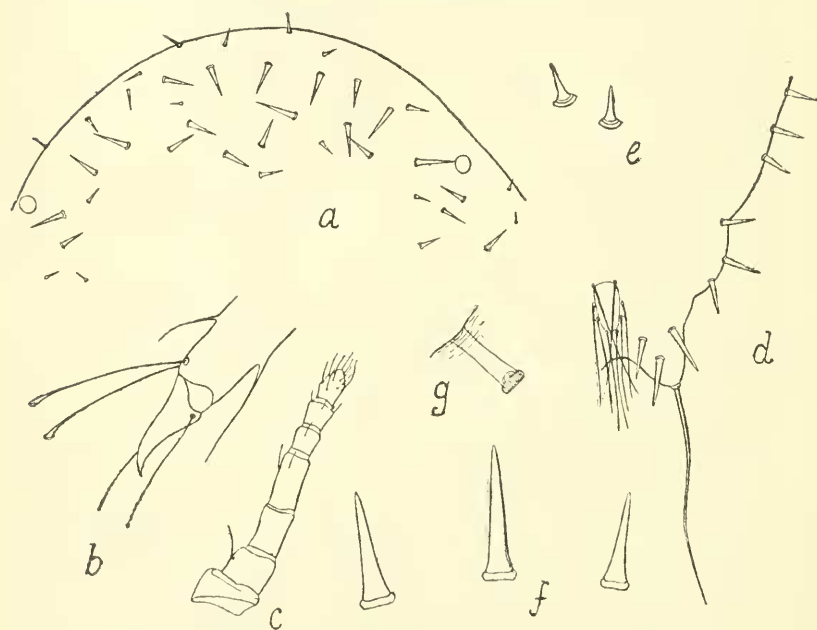


Fig. 3.—*Eriococcus pseudinsignis*. Adult ♀: *a*, anterior extremity showing disposition of spines, $\times 135$; *b*, antenna, $\times 135$; *c*, foot, $\times 450$; *d*, posterior extremity, showing disposition of spines, $\times 135$; *e*, spines on median area of thorax, $\times 450$; *f*, spines from margin of abdomen, $\times 450$; *g*, one of the tubular pores, $\times 450$.

blade with the stem of the grass, where they are practically concealed from view.

The species is closely allied to *insignis*; but may be distinguished by the more irregular disposition of the marginal spines, by the larger number and greater diffusion of the spines on the frontal area, and by the presence of small spines on the median area of the thorax. The marginal spines are markedly smaller than those of *insignis*, and are arranged in groups of three (instead of four or five) on the abdominal segments.

Phenacoccus aceris Sign.—On stems of peach-trees (under glass); Lyme Regis, Dorset, 12.iv.1920. The insects were then fully grown, and had constructed their ovisacs by the middle of the month; while the same species, on gorse, in the open, was still in the nymphal stage. I can find no previous record of the occurrence of *Phen. aceris* upon peach-trees.

Pseudococcus gahani Green.—On *Ceanothus* sp. (apparently *veitchii*); Somerset, v.1920. Mr. N. Cunliffe, to whom I am indebted for the specimens, reports that the plants were very heavily infested, four large bushes being nearly ruined by the attacks of the insects. The plants were growing in the open, two of them trained against a wall.

It is noticeable that these examples do not respond to irritation by exuding drops of dark-coloured fluid, as was observed with the original examples from *Ribes*.

Pseudococcus walkeri Newst.—I have found examples of this species on several occasions inside the stems of grasses, where they had formed their ovisacs. The insect on each occasion had crept into the broken end of the stalk, where it was under such close compression that the body had assumed a cylindrical form which completely plugged the hollow.

Prof. Newstead, in his description of the species (Mon. Brit. Cocc., ii, p. 169), gives no particulars of the ceriferous tracts or of the cerarial spines. I find that the former are 34 in number (17 on each side of the body), each of which carries a pair of spines and a group of ceriferous pores. The pores on the frontal and anal cerarii are more numerous and crowded, as might be expected from the size of the waxy processes associated with those areas. The anal cerarii are further characterized by a large, circumscribed, heavily chitinized patch, and by the size of the spines, which are many times larger than those on the other cerarii. The second tract, on each side, is often rather obscure, and the spines associated with it have a tendency to become setiform.

Pseudococcus maritimus Ehrh. (Fig. 4.)

Syn. *Pseudococcus longispinus latipes* Green, Ent. Mo. Mag. liii, p. 264, Nov. 1917.

The supposed variety of *Ps. longispinus*, described in this Journal four years ago, is referable to *maritimus*.

In my note (E. M. M., June 1920, p. 121) on the occurrence of *Ps. maritimus* in this country, I omitted to draw attention to a striking character noticeable on the third pair of legs. It will be seen

from the accompanying figures (*a, b*) that the tibia of this limb is markedly dilated, and that its outer area is crowded with minute circular pores. Similar but more scattered pores occur on the inner area of the femur. The anterior and mid limbs are without either of these characters. This dilation of the tibia does not, however, appear to be a strictly specific character, for of American examples received from Mr. G. F. Ferris, some exhibit this structure while others do not.

I have for some time noticed the presence of such pores on the hind limbs of various Coccidae, sometimes on the coxae, sometimes on the femur, or, as in *maritimus*, concentrated on the tibiae; but have not

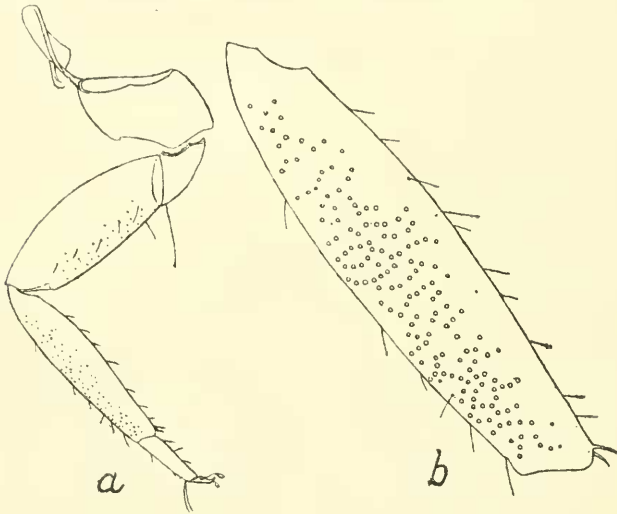


Fig. 4.—*Pseudococcus maritimus*. Adult ♀ : *a*, hind leg, $\times 80$; *b*, tibia of hind leg, $\times 220$.

observed them on either the anterior or mid limbs. Analogous characters, in the form of translucent maculae, are to be found on the hind coxae of many species of *Eriococcus*. Their repeated presence, on the hind limbs only, suggests that these pores must have some function, possibly in connection with the process of oviposition.

Ps. maritimus was recorded (in the British Isles) from a greenhouse in Camberley, last year only; but has probably been an unrecognized occupant of our glass-houses for some time past. I found it, in April of last year, infesting plants of *Nerium* and *Abutilon* under glass at Truro (Cornwall), and I have examples of the same species from conservatories in Manchester.

(To be continued.)